

Remarks

Claims 1-23 are pending in the application. Claims 1-23 have been rejected under 35 U.S.C. § 112, First Paragraph. Claims 1, 3-6, 8 and 10-13 have been rejected under 35 U.S.C. § 102(b). Claims 2, 7, 9 and 14-23 have been rejected under 35 U.S.C. § 103(a). In view of the following remarks, reconsideration and withdrawal of these grounds of rejection is requested.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-23 stand rejected under 35 U.S.C. § 112, Paragraph One, as lacking enablement in the specification. For the reasons set forth below, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Particularly, the Examiner contends that the specific structure of the “connector modules” recited in claims 1 (now claim 3), 8 (now claim 10), 15 and 18 is not taught in the specification; the Applicant respectfully disagrees.

The shape and orientation of the connector modules 6 are shown in Figures 1-3. In particular, Figure 1 shows that the connector modules are rectangular in shape and are disposed at various locations within the lower frame 9. As shown in Figures 2 and 3 the underside of the connector modules 6 include cavities (with terminals) for receiving electrical wires (not shown). Spacers 10 within the lower frame 9 serve to secure the electrical wires to the connector modules 6, as now recited in all of claims 3, 10, 15 and 18.

Figure 2 shows the connector modules 6 and spacers 10 in a semi-locked position (i.e., the top of the connector modules and spacers extends above the top of the lower frame 9). Once the electrical wires (not shown) are inserted into the lower frame 9 (through opening 40), the connector modules 6 and spacers 10 are pressed down into the lower frame, so that upper portions thereof are made flush with the top of the lower frame, as shown in Figure 3. This action ‘locks’ the wires into position, and substantially prevents their movement within the lower frame 9. Therefore, for at least these reasons, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

Claims 1, 3-6, 8 and 10-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Borzi (U.S. Pat. No. 6,077,102). Independent claims 1 and 8 have been canceled in favor of new independent claims 3 and 10. Therefore, reconsideration and withdrawal of this ground of rejection with respect to claims 3-6 and 10-13 is respectfully requested.

Claim 3 has been amended to recite:

An electrical fuse box comprising: an upper frame; a plurality of electrical components pre-assembled within said upper frame; a lower frame, wherein said lower frame is dimensioned and configured to engage said upper frame; a plurality of connector modules pre-assembled within said lower frame, wherein said connector modules are dimensioned and configured to electrically engage electrical wires; an upper cover mounted on said upper frame; a lower cover mounted on said lower frame; and, spacers positioned within said lower frame for locking said electrical wires to said connector modules. [emphasis added].

Thus, independent claim 3 now requires a fuse box including “spacers” positioned within a “lower frame” thereof for locking electrical wires to “connector modules” (see, page 7, line 21 to page 8, line 2 and page 9, lines 1-4 for support). As explained below, Borzi fails to disclose or suggest such an invention.

Borzi teaches an electrical distribution assembly 2 which includes a lower housing 12, an upper housing 14, and a cover 16. The assembly 2 also includes a plurality of electrical devices 8 disposed in terminal cavities in the upper housing 14. The assembly 2 further includes a plurality of connector bodies 56, and a plurality of wire dressing covers 74, disposed in a connector retainer 86. The connector retainer 86 is disposed within a splash shield 34 to protect the retainer (and the electrical components disposed therein) from water or other liquid. Bundles of wires 58 are provided to the connector retainer 86 through a slot 110 (See Fig. 2). Separate slots 82 in each of the wire dressing covers 74 guide the wires from the wire bundles 58 to the connector bodies 56.

Borzi fails to disclose, teach or suggest “spacers” disposed within the assembly 2 which serve to lock the wires (of wire bundles 58) to the connector bodies 56, as now recited in claim 3.

In fact, Borzi does not teach any mechanism for locking the wires (of wire bundles 58) to the connector bodies 56. Accordingly, reconsideration and withdrawal of this ground of rejection with respect to claims 3 and 4-7 is respectfully requested.

Independent claim 10 has been amended to include limitations similar to those discussed above with reference to claim 3. Thus, for at least those reasons discussed above with reference to claim 3, reconsideration and withdrawal of this ground of rejection with respect to claims 10-13 is also respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 2 and 9 stand rejected under 35 U.S.C. § 103(a) as being obvious over Borzi taken alone. As discussed above, independent claims 3 and 10, upon which claims 2 and 9 depend, recite limitations which are neither taught nor suggested by Borzi. In particular, Borzi fails to disclose, teach or suggest “spacers” disposed within an assembly which serve to lock electrical wires to connector bodies. Hence, for at least those reasons discussed above with reference to claims 3 and 10, reconsideration and withdrawal of this ground of rejection with respect to claims 2 and 9 is respectfully requested.

Claims 7 and 14-23 stand rejected under 35 U.S.C. § 103(a) as being obvious over Borzi in view of Lanquist (U.S. Pat. No. 5,671,273). Again, as discussed above, Borzi fails to disclose, teach or suggest “spacers” disposed within an assembly which serve to lock electrical wires to connector bodies. Hence, for at least those reasons discussed above with reference to claim 3, reconsideration and withdrawal of this ground of rejection with respect to claim 7 is respectfully requested.

Independent claim 15 has been amended to recite:

An electrical fuse relay box comprising: an upper frame having an upper compartment and a first locking receiver; a plurality of electrical components pre-assembled within said upper compartment; a lower frame having a lower compartment and a second locking receiver, wherein said lower frame is dimensioned and configured to engage said upper frame; a plurality of connector modules pre-assembled within said lower compartment, wherein

said connector modules are dimensioned and configured to electrically engage electrical wires; spacers positioned within the lower compartment for locking said electrical wires; an upper cover pivotally mounted on said upper compartment; and a lower cover pivotally mounted on said lower compartment, wherein said upper cover comprises a first locking member dimensioned and configured to engage said first locking receiver, wherein said lower cover comprises a second locking member dimensioned and configured to engage said second locking receiver; and, wherein said connector modules and spacers are disposed within the lower compartment in a pre-assembled and unlocked position, and are subsequently locked into position in the lower compartment. [emphasis added].

Thus, claim 15 now requires “connectors” and “spacers” which are first disposed in an “unlocked” position, and are subsequently disposed in a “locked” position once electrical wires have been inserted into the connectors. Neither Borzi nor Lanquist disclose, teach or suggest such an invention, and thus, reconsideration and withdrawal of this ground of rejection with respect to claims 15-17 is respectfully requested.

Independent claim 18 has been amended to recite:

A method of pre-assembling an electrical fuse relay box, said electrical fuse relay box comprising an upper frame attached to a lower frame, said upper frame having an upper compartment and said lower frame having a lower compartment, said method comprising: mounting a plurality of electrical components within said upper compartment in a pre-locked position; mounting a plurality of connector modules and spacers, in a pre-assembled and unlocked position, within said lower compartment, wherein said connector modules being configured for electrically engaging electrical wires; positioning an upper cover on said upper compartment in a closed position; positioning a lower cover on said lower compartment in a closed position; opening the lower cover and locking said electrical wires into position with said spacers; opening the upper cover and pushing said electrical components into a set locked position so as to engage the connector modules, and thereby place the connector modules into a locked position within the lower compartment; attaching said upper frame to said lower frame; and, closing the lower cover and the upper cover.

Appl. No. 10/616,791
Amdt. Dated March 15, 2004
Reply to Office Action of December 18, 2003

Hence, claim 18 now requires a method of "pre-assembling" a fuse relay box wherein "connector modules" and "spacers" are first placed into a "lower compartment" in an unlocked position, and are later moved to a locked position so as to attach a plurality of electrical components to a plurality of electrical wires. As noted above, Borzi fails to disclose or suggest "spacers" which are used to secure electrical wires to connector modules. Borzi also fails to disclose or suggest connector modules having 'locked' and 'unlocked' positions. Furthermore, Lanquist fails to disclose or suggest such an inventive method. Therefore, reconsideration and withdrawal of this ground of rejection with respect to claims 18-23 is respectfully requested.

Conclusion

In view of the foregoing remarks, Applicants submit that this application is in condition for allowance at an early date, which action is earnestly solicited.

Respectfully submitted,



Paul A. Taufer
Reg. No. 35,703
Darius C. Gambino
Reg. No. 41,472

Piper Rudnick LLP
3400 Two Logan Square
18th & Arch Streets
Philadelphia, PA. 19103
Phone: 215.656.3300